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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,418	01/21/2004	Ichio Akami	000004.00682	1222
27557	7590	07/09/2004	EXAMINER	
BLANK ROME LLP 600 NEW HAMPSHIRE AVENUE, N.W. WASHINGTON, DC 20037			CADUGAN, ERICA E	
			ART UNIT	PAPER NUMBER
			3722	

DATE MAILED: 07/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/760,418

Applicant(s)

AKAMI ET AL.

Examiner

Erica E Cadugan

Art Unit

3722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2004.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 40-42 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 40-42 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/889,318.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/11/2004.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for priority under 35 U.S.C. 119(a)-(d) based upon an application filed in Japan on January 13, 1999. A claim for priority under 35 U.S.C. 119(a)-(d) cannot be based on said application, since the United States application was filed more than twelve months thereafter.
2. Note that no proper benefit claims for priority of any earlier application has been made in this case. However, since the filing receipt set forth that the present application is a continuation of U.S. 10/288,369, filed 11/6/2003, a benefit claim may be now asserted by the applicant to this application ('369) without any petition. However, it is noted that Applicant still needs to make a proper benefit claim to this application (i.e., Applicant still needs to amend the first sentence of the specification to reflect that the present application is a continuation of the '369 application).
3. Further note that if applicant desires priority under 35 U.S.C. 120 based upon other previously filed application(s) (i.e., to try to get the chain of priority to go back to the aforementioned Japanese patent application by asserting that the present application is a continuation of 10/288,369, which is a divisional of 09/889,318, now U.S. Pat. No. _____, filed 7/13/01, which is a national stage application under 371 of PCT/JP00/00134, filed 1/13/2000, which claims foreign priority to JP 11-6914, filed 1/13/1999), specific reference to the earlier filed applications to which a priority claim is desired to be made must be made in the instant application. For benefit claims under 35 U.S.C. 120, 121 or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of the applications. This should appear as the first sentence of the specification following the title, preferably as a

separate paragraph unless it appears in an application data sheet. The status of nonprovisional parent application(s) (whether patented or abandoned) should also be included. If a parent application has become a patent, the expression “now Patent No. _____” should follow the filing date of the parent application. If a parent application has become abandoned, the expression “now abandoned” should follow the filing date of the parent application.

4. If the application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a utility or plant application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A priority claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed claim for priority under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was

Art Unit: 3722

due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Specification

5. The abstract of the disclosure is objected to because it contains legal phrasing such as “means” or “said”. Correction is required. See MPEP § 608.01(b).

Claim Objections

6. Claim 41 is objected to because of the following informalities: In claim 41, line 1, it appears that “A m thod” should be –A method--; in claim 41, line 1, it appears that “wher in” should be –wherein--; in claim 41, line 3, it appears that “combination” should be –combinations—and that “group d” should be –grouped--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112: The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 40-42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 40-42 are replete with instances that do not particularly point out and distinctly claim the subject matter of applicant’s invention. Examples of some of these instances are listed below, but these instances are not limited to the listed examples. Applicant is advised to closely review the claims for other occurrences. In claim 40, line 5, for example, it is unclear via the lack of a modifying article whether or not “divided tools” is intended to be a subset of the

Art Unit: 3722

“divided tools” previously set forth in the claim. If so, a definite article such as --the-- or --said-- should be provided prior to “divided tools” in line 4.

There are several positively recited limitations that lack sufficient antecedent bases in the claims. A couple of examples of this are: “the bending station” in claim 40 (previously “at least one”); “the tool magazine provided outside the bending press” found in at least claim 40. This is not meant to be an all-inclusive list of such occurrences. Applicant is required to review the claims and correct any other such occurrences of limitations lacking sufficient antecedent basis.

Regarding claim 40, firstly, it is unclear whether the text in parenthesis, “(cross section shape)” is intended to form part of the claim. Secondly, a broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by “such as” and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, these claims recite the broad recitation “type”, and these claim also recite “cross section shape” which appears to be the narrower statement of the range/limitation.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action: (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 40-42, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,828,575 (Sakai) in view of either of JP 11-000718 (hereinafter '718) or JP 10-225724 (hereinafter '724). Sakai teaches a bending machine (Figures 1A and 1B) and also "tool housing device" or bins (see Figure 32) wherein the location of the tools is stored in a memory (Figure 32, "STORAGE = BIN A7"). Sakai also teaches a programming device in which the tool types and mounting locations are determined (see Figures 28 and 32, also columns 19-20 and 76, for example) based on the shape and dimensions of a part to be bent (Figure 28, col. 19-20, 76, for example), i.e., the bend line length, angle, etc. Additionally, Sakai teaches searching a database 30 for similar parts that have been previously manufactured (col. 19, for example), and regarding claim 41, further teaches that job scheduling is optimized based on a wide variety of criteria including the "current set up of each machine" (i.e., the tooling thereon), and "the types of bends and tooling required for each job and the other types of jobs that need to be performed within the same time frame or period" (col. 83-84, for example, and specifically col. 83, lines 60-67). Sakai does not appear to teach a tool exchange device (it is noted that the method claims in this case do not require the use of the tool exchange device, but only require that the press have one).

Either of JP 11-000718 (hereinafter '718) or JP 10-225724 (hereinafter '724) teach automatic tool changing devices responsive to an automatic programming device.

Specifically, regarding '718, '718 teaches a bending machine 1 including a tool storage shelf or "housing" 9 (Figures 1-2). An automatic tool changing device (Figure 2) is utilized to exchange divided (see Figure 1) tools between the bending machine 1 and the "housing" 9 (Figures 1-2, abstract). An automatic programming unit 5 is utilized which determines the working data, order of bending work, and the die to be used (see abstract) to produce a bent workpiece. Note that, for example, the cross-sectional shape of the die, the length of the die, and stage layout are determined (see abstract), and also note that for the automatic programming unit 5 to determine these features, inherently there must be some knowledge of the desired workpiece configuration input thereto (and thus included in at least the RAM of the computing device 5) including the workpiece bending line length, flange length, and bending angle set forth the claims. Note also that the automatic programming device 5 includes data on the storage locations of the tools in the tool storage shelf 9 (Figures 1-2, abstract).

Note that the automatic programming unit determines the stage layout (see abstract), which would inherently involve determining which bending station gets which tool, and as previously described, such determination is based on a desired configuration of finished workpiece, and thus inherently is based on such characteristics of the workpiece including "bending line length", "flange length", and "bending angle".

Regarding '724, '724 teaches a bending machine 1 including a tool storage shelves 17 which themselves can be considered a "housing", or alternatively, which shelves are shown in Figure 1 as being located in a housing (Figure 1). An automatic die supplying device 3 (Figure 1) is utilized to exchange divided (see Figure 1) tools between the bending machine 1 and the shelves 17 (Figure 1, abstract). An automatic programming apparatus 7 is utilized which

Art Unit: 3722

determines the working data, order of bending work, and the die to be used (see abstract) to produce a bent workpiece with a particular shape. Note that, for example, the stage layout of dies is determined (see abstract), and also note that for the automatic programming apparatus 7 to determine which tool to use to produce a desired workpiece shape, inherently there must be some knowledge of the desired workpiece configuration input thereto (and thus included in at least the RAM of the computing device 7) including the workpiece bending line length ('724 specifically teaches taking length and angle into account, see paragraphs 0024-0025, for example), flange length, and bending angle set forth the claims. Note also that the automatic programming apparatus 7 includes a database including the storage locations of the tools in the tool storage shelves 17 (Figure 1, abstract, paragraph 0030), which database is used in order to choose a predetermined tool from a shelf 17 (paragraph 0030, abstract).

Note that the automatic programming unit determines the stage layout (see abstract), which would inherently involve determining which bending station gets which tool, and as previously described, such determination is based on a desired configuration of finished workpiece, and thus inherently is based on such characteristics of the workpiece including "bending line length", "flange length", and "bending angle".

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided the automatic tool changing device taught by either of '718 or '724 to the press taught by Sakai for the purpose of more fully automating Sakai's manufacturing system, thus reducing human error and increasing safety (since the operator is in contact with the press ram less), which benefits would be readily understood by those of ordinary skill in the art.

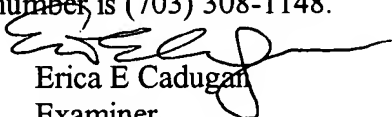
Art Unit: 3722

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erica E Cadugan whose telephone number is (703) 308-6395. The examiner can normally be reached on M-F, 7:30 a.m. to 5:00 p.m., alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea L. Wellington can be reached on (703) 308-2159. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.


Erica E Cadugan
Examiner
Art Unit 3722

eec

July 8, 2004